O3CO

5   OIPE

Input Set : A:\203515US77.txt
Output Set: N:\CRF3\01152002\J023888.raw

P.S

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 3 <110> APPLICANT: CANFIELD, William
 5 <120> TITLE OF INVENTION: SOLUBLE GLcNAc PHOSPHOTRANSFERASE
 7 <130> FILE REFERENCE: 203515US77
 9 <140> CURRENT APPLICATION NUMBER: US/10/023,888
 9 <141> CURRENT FILING DATE: 2001-12-21
 9 <160> NUMBER OF SEQ ID NOS: 38
11 <170> SOFTWARE: PatentIn version 3.1
13 <210> SEQ ID NO: 1
14 <211> LENGTH: 3600
15 <212> TYPE: DNA
16 <213> ORGANISM: hybrid
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23 gtttgtttg attcctatag agacaatatt gctggaaagt cctttcagaa tcggctttgt      180
25 ctgcccatgc cgattgacgt tgtttacacc tgggtgaatg gcacagatct tgaactactg     240
27 aaggaactac agcaggtcag agaacagatg gaggaggagc agaaagcaat gagagaaatc     300
29 cttgggaaaa acacaacgga acctactaag aagagtgaga agcagttaga gtgtttgcta     360
31 acacactgca ttaaggtgcc aatgcttgtc ctggacccag ccctgccagc caacatcacc     420
33 ctgaaggacc tgccatctct ttatccttct tttcattctg ccagtgacat tttcaatgtt     480
35 gcaaaaccaa aaaacccttc taccaatgtc tcagttgttg tttttgacag tactaaggat     540
37 gttgaagatg cccactctgg actgcttaaa ggaaatagca gacagacagt atggagGGGc     600
39 tacttgacaa cagataaaga agtccctgga ttagtgctaa tgcaagattt ggcttcctg      660
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49 cagtctaagc aggatgaaga catctctgcc agtcgttttg aagatatttt cattgtcacc     960
51 tactcattgc gatctatcga gaggcatgca ccatgggttc ggaatatttt tattgaaagt    1020
53 aacgggcaga ttccatcctg gctgaacctt gacaatcctc gagtgacaat agtaacacac    1080
55 caggatgttt ttcgaaattt gagccacttg cctacctta gttcacctgc tattgaaagt    1140
57 cacgttcatc gcatcgaagg gctgtcccag aagtttattt acctaaatga tgatgtcatg    1200
59 tttgggaagg atgtctggcc agatgatttt tacagtcact ccaaaggcca gaaggtttat    1260
61 ttgacatggc ctgtgccaaa ctgtgccgag ggctgcccag gttcctggat taaggatggc    1320
63 tattgtgaca aggcttgtaa taattcagcc tgcgattggg atggtgggga ttgctctgga    1380
65 aacagtggag ggagtcgcta tattgcagga ggtggaggta ctgggagtat tggagttgga    1440
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71 gatgctggcg actgtgggca agatcatttt catgaattgt ataaagtgat ccttctccca    1620
73 aaccagactc actatattat tccaaaaggt gaatgcctgc cttatttcag ctttgcagaa    1680
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79 atacatttta atctcacgtt tcaaaataca aacgatgaag agttcaaaat gcagataaca    1860
81 gtggaggtgg acacaaggga gggaccaaaa ctgaattcta cggcccagaa gggttacgaa    1920
83 aatttagtta gtcccataac acttcttcca gaggcggaaa tccttttga ggatattccc    1980
85 aaagaaaaac gcttcccgaa gtttaagaga catgatgtta actcaacaag gagagcccag    2040
87 gaagaggtga aaattcccct ggtaaatatt tcactccttc caaaagacgc ccagttgagt    2100
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/023,888

Input Set : A:\203515US77.txt
Output Set: N:\CRF3\01152002\J023888.raw

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 93 caagctataa taacagatga aacaaatgac agtttggtgg ctccacagga aaaacaggtt    2280
 95 cataaaagca tcttgccaaa cagcttagga gtgtctgaaa gattgcagag gttgactttt    2340
 97 cctgcagtga gtgtaaaagt gaatggtcat gaccagggtc agaatccacc cctggacttg    2400
 99 gagaccacag caagatttag agtggaaact cacacccaaa aaaccatagg cggaaatgtg    2460
101 acaaaagaaa agcccccatc tctgattgtt ccactggaaa gccagatgac aaaagaaaag    2520
103 aaaatcacag ggaaagaaaa agagaacagt agaatggagg aaaatgctga aaatcacata    2580
105 ggcgttactg aagtgttact tggaagaaag ctgcagcatt acacagatag ttacttgggc    2640
107 tttttgccat gggagaaaaa aaagtatttc ctagatcttc tcgacgaaga agagtcattg    2700
109 aagacacaat tggcctactt cactgatagc aagaatagag ccagatacaa gagagataca    2760
111 tttgcagatt ccctcagata tgtaaataaa attctaaata gcaagtttgg attcacatcg    2820
113 cggaaagtcc ctgctcacat gcctcacatg attgaccgga ttgttatgca agaactgcaa    2880
115 gatatgttcc ctgaagaatt tgacaagacg tcatttcaca aagtgcgcca ttctgaggat    2940
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119 tctcaagtct ttgatgaagt tgatacagat caatctggtg tcttgtctga cagagaaatc    3060
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123 gaacacatgc taataaattg ctcaaaaatg cttcctgctg atatcacgca gctaaataat    3180
125 attccaccaa ctcaggaatc ctactatgat cccaacctgc caccggtcac taaaagtcta    3240
127 gtaacaaact gtaaaccagt aactgacaaa atccacaaag catataagga caaaaacaaa    3300
129 tataggtttg aaatcatggg agaagaagaa atcgctttta aaatgattcg taccaacgtt    3360
131 tctcatgtgg ttggccagtt ggatgacata agaaaaaacc ctaggaagtt tgtttgcctg    3420
133 aatgacaaca ttgaccacaa tcataaagat gctcagacag tgaaggctgt tctcagggac    3480
135 ttctatgaat ccatgttccc cataccttcc caatttgaac tgccaagaga gtatcgaaac    3540
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141 <211> LENGTH: 1199
142 <212> TYPE: PRT
143 <213> ORGANISM: hybrid

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151 Gly Ser Thr Gly Asp Glu Asp Gln Val Asp Pro Arg Leu Ile Asp Gly
152             20                  25                  30
155 Lys Leu Ser Arg Asp Gln Tyr His Val Leu Phe Asp Ser Tyr Arg Asp
156         35                  40                  45
159 Asn Ile Ala Gly Lys Ser Phe Gln Asn Arg Leu Cys Leu Pro Met Pro
160     50                  55                  60
163 Ile Asp Val Val Tyr Thr Trp Val Asn Gly Thr Asp Leu Glu Leu Leu
164 65                  70                  75                  80
167 Lys Glu Leu Gln Gln Val Arg Glu Gln Met Glu Glu Glu Gln Lys Ala
168                 85                  90                  95
171 Met Arg Glu Ile Leu Gly Lys Asn Thr Thr Glu Pro Thr Lys Lys Ser
172             100                 105                 110
175 Glu Lys Gln Leu Glu Cys Leu Leu Thr His Cys Ile Lys Val Pro Met
176         115                 120                 125
179 Leu Val Leu Asp Pro Ala Leu Pro Ala Asn Ile Thr Leu Lys Asp Leu
180     130                 135                 140
183 Pro Ser Leu Tyr Pro Ser Phe His Ser Ala Ser Asp Ile Phe Asn Val
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RAW SEQUENCE LISTING

DATE: 01/15/2002
TIME: 19:00:25

PATENT APPLICATION: US/10/023,888

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Output Set: N:\CRF3\01152002\J023888.raw

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184 145                         150                 155                     160
187 Ala Lys Pro Lys Asn Pro Ser Thr Asn Val Ser Val Val Val Phe Asp
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191 Ser Thr Lys Asp Val Glu Asp Ala His Ser Gly Leu Leu Lys Gly Asn
192             180                 185                 190
195 Ser Arg Gln Thr Val Trp Arg Gly Tyr Leu Thr Thr Asp Lys Glu Val
196             195                 200                 205
199 Pro Gly Leu Val Leu Met Gln Asp Leu Ala Phe Leu Ser Gly Phe Pro
200         210                 215                 220
203 Pro Thr Phe Lys Glu Thr Asn Gln Leu Lys Thr Lys Leu Pro Glu Asn
204 225                 230                 235                 240
207 Leu Ser Ser Lys Val Lys Leu Leu Gln Leu Tyr Ser Glu Ala Ser Val
208             245                 250                 255
211 Ala Leu Leu Lys Leu Asn Asn Pro Lys Asp Phe Gln Glu Leu Asn Lys
212             260                 265                 270
215 Gln Thr Lys Lys Asn Met Thr Ile Asp Gly Lys Glu Leu Thr Ile Ser
216             275                 280                 285
219 Pro Ala Tyr Leu Leu Trp Asp Leu Ser Ala Ile Ser Gln Ser Lys Gln
220         290                 295                 300
223 Asp Glu Asp Ile Ser Ala Ser Arg Phe Glu Asp Asn Glu Glu Leu Arg
224 305                 310                 315                 320
227 Tyr Ser Leu Arg Ser Ile Glu Arg His Ala Pro Trp Val Arg Asn Ile
228             325                 330                 335
231 Phe Ile Val Thr Asn Gly Gln Ile Pro Ser Trp Leu Asn Leu Asp Asn
232             340                 345                 350
235 Pro Arg Val Thr Ile Val Thr His Gln Asp Val Phe Arg Asn Leu Ser
236             355                 360                 365
239 His Leu Pro Thr Phe Ser Ser Pro Ala Ile Glu Ser His Val His Arg
240         370                 375                 380
243 Ile Glu Gly Leu Ser Gln Lys Phe Ile Tyr Leu Asn Asp Asp Val Met
244 385                 390                 395                 400
247 Phe Gly Lys Asp Val Trp Pro Asp Asp Phe Tyr Ser His Ser Lys Gly
248             405                 410                 415
251 Gln Lys Val Tyr Leu Thr Trp Pro Val Pro Asn Cys Ala Glu Gly Cys
252             420                 425                 430
255 Pro Gly Ser Trp Ile Lys Asp Gly Tyr Cys Asp Lys Ala Cys Asn Asn
256             435                 440                 445
259 Ser Ala Cys Asp Trp Asp Gly Gly Asp Cys Ser Gly Asn Ser Gly Gly
260         450                 455                 460
263 Ser Arg Tyr Ile Ala Gly Gly Gly Gly Thr Gly Ser Ile Gly Val Gly
264 465                 470                 475                 480
267 Gln Pro Trp Gln Phe Gly Gly Gly Ile Asn Ser Val Ser Tyr Cys Asn
268             485                 490                 495
271 Gln Gly Cys Ala Asn Ser Trp Leu Ala Asp Lys Phe Cys Asp Gln Ala
272             500                 505                 510
275 Cys Asn Val Leu Ser Cys Gly Phe Asp Ala Gly Asp Cys Gly Gln Asp
276             515                 520                 525
279 His Phe His Glu Leu Tyr Lys Val Ile Leu Leu Pro Asn Gln Thr His
280         530                 535                 540
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/023,888

DATE: 01/15/2002
TIME: 19:00:25

Input Set : A:\203515US77.txt
Output Set: N:\CRF3\01152002\J023888.raw

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283 Tyr Ile Ile Pro Lys Gly Glu Cys Leu Pro Tyr Phe Ser Phe Ala Glu
284 545             550             555             560
287 Val Ala Lys Arg Gly Val Glu Gly Ala Tyr Ser Asp Asn Pro Ile Ile
288             565             570             575
291 Arg His Ala Ser Ile Ala Asn Lys Trp Lys Thr Ile His Leu Ile Met
292             580             585             590
295 His Ser Gly Met Asn Ala Thr Thr Ile His Phe Asn Leu Thr Phe Gln
296             595             600             605
299 Asn Thr Asn Asp Glu Glu Phe Lys Met Gln Ile Thr Val Glu Val Asp
300             610             615             620
303 Thr Arg Glu Gly Pro Lys Leu Asn Ser Thr Ala Gln Lys Gly Tyr Glu
304 625             630             635             640
307 Asn Leu Val Ser Pro Ile Thr Leu Leu Pro Glu Ala Glu Ile Leu Phe
308             645             650             655
311 Glu Asp Ile Pro Lys Glu Lys Arg Phe Pro Lys Phe Lys Arg His Asp
312             660             665             670
315 Val Asn Ser Thr Arg Arg Ala Gln Glu Glu Val Lys Ile Pro Leu Val
316             675             680             685
319 Asn Ile Ser Leu Leu Pro Lys Asp Ala Gln Leu Ser Leu Asn Thr Leu
320             690             695             700
323 Asp Leu Gln Leu Glu His Gly Asp Ile Thr Leu Lys Gly Tyr Asn Leu
324 705             710             715             720
327 Ser Lys Ser Ala Leu Leu Arg Ser Phe Leu Met Asn Ser Gln His Ala
328             725             730             735
331 Lys Ile Lys Asn Gln Ala Ile Ile Thr Asp Glu Thr Asn Asp Ser Leu
332             740             745             750
335 Val Ala Pro Gln Glu Lys Gln Val His Lys Ser Ile Leu Pro Asn Ser
336             755             760             765
339 Leu Gly Val Ser Glu Arg Leu Gln Arg Leu Thr Phe Pro Ala Val Ser
340             770             775             780
343 Val Lys Val Asn Gly His Asp Gln Gly Gln Asn Pro Pro Leu Asp Leu
344 785             790             795             800
347 Glu Thr Thr Ala Arg Phe Arg Val Glu Thr His Thr Gln Lys Thr Ile
348             805             810             815
351 Gly Gly Asn Val Thr Lys Glu Lys Pro Pro Ser Leu Ile Val Pro Leu
352             820             825             830
355 Glu Ser Gln Met Thr Lys Glu Lys Lys Ile Thr Gly Lys Glu Lys Glu
356             835             840             845
359 Asn Ser Arg Met Glu Glu Asn Ala Glu Asn His Ile Gly Val Thr Glu
360 850             855             860
363 Val Leu Leu Gly Arg Lys Leu Gln His Tyr Thr Asp Ser Tyr Leu Gly
364 865             870             875             880
367 Phe Leu Pro Trp Glu Lys Lys Lys Tyr Phe Leu Asp Leu Leu Asp Glu
368             885             890             895
371 Glu Glu Ser Leu Lys Thr Gln Leu Ala Tyr Phe Thr Asp Ser Lys Asn
372             900             905             910
375 Arg Ala Arg Tyr Lys Arg Asp Thr Phe Ala Asp Ser Leu Arg Tyr Val
376             915             920             925
379 Asn Lys Ile Leu Asn Ser Lys Phe Gly Phe Thr Ser Arg Lys Val Pro
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/023,888

Input Set : A:\203515US77.txt
Output Set: N:\CRF3\01152002\J023888.raw

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384 945                   950                 955                 960
387 Asp Met Phe Pro Glu Glu Phe Asp Lys Thr Ser Phe His Lys Val Arg
388                   965                 970                 975
391 His Ser Glu Asp Met Gln Phe Ala Phe Ser Tyr Phe Tyr Tyr Leu Met
392               980                 985                 990
395 Ser Ala Val Gln Pro Leu Asn Ile  Ser Gln Val Phe Asp  Glu Val Asp
396               995                 1000                1005
399 Thr Asp  Gln Ser Gly Val Leu  Ser Asp Arg Glu Ile  Arg Thr Leu
400     1010                   1015                1020
403 Ala Thr  Arg Ile His Glu Leu  Pro Leu Ser Leu Gln  Asp Leu Thr
404     1025                   1030                1035
407 Gly Leu  Glu His Met Leu Ile  Asn Cys Ser Lys Met  Leu Pro Ala
408     1040                   1045                1050
411 Asp Ile  Thr Gln Leu Asn Asn  Ile Pro Pro Thr Gln  Glu Ser Tyr
412     1055                   1060                1065
415 Tyr Asp  Pro Asn Leu Pro Pro  Val Thr Lys Ser Leu  Val Thr Asn
416     1070                   1075                1080
419 Cys Lys  Pro Val Thr Asp Lys  Ile His Lys Ala Tyr  Lys Asp Lys
420     1085                   1090                1095
423 Asn Lys  Tyr Arg Phe Glu Ile  Met Gly Glu Glu Glu  Ile Ala Phe
424     1100                   1105                1110
427 Lys Met  Ile Arg Thr Asn Val  Ser His Val Val Gly  Gln Leu Asp
428     1115                   1120                1125
431 Asp Ile  Arg Lys Asn Pro Arg  Lys Phe Val Cys Leu  Asn Asp Asn
432     1130                   1135                1140
435 Ile Asp  His Asn His Lys Asp  Ala Gln Thr Val Lys  Ala Val Leu
436     1145                   1150                1155
439 Arg Asp  Phe Tyr Glu Ser Met  Phe Pro Ile Pro Ser  Gln Phe Glu
440     1160                   1165                1170
443 Leu Pro  Arg Glu Tyr Arg Asn  Arg Phe Leu His Met  His Glu Leu
444     1175                   1180                1185
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448     1190                   1195
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452 <211> LENGTH: 5597
453 <212> TYPE: DNA
454 <213> ORGANISM: Homo sapiens
456 <400> SEQUENCE: 3
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463 tgcagagaca aacctatacc tgcctgtccc acaggtatgg gctctacgtg tgcttcttgg    240
465 gcgtcgttgt caccatcgtc tccgccttcc agttcggaga ggtggttctg gaatggagcc    300
467 gagatcaata ccatgttttg tttgattcct atagagacaa tattgctgga aagtcctttc    360
469 agaatcggct ttgtctgccc atgccgattg acgttgttta cacctgggtg aatggcacag    420
471 atcttgaact actgaaggaa ctacagcagg tcagagaaca gatggaggag gagcagaaag    480
473 caatgagaga aatccttggg aaaaacacaa cggaacctac taagaagagt gagaagcagt    540
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VERIFICATION SUMMARY   DATE: 01/15/2002
PATENT APPLICATION: US/10/023,888   TIME: 19:00:26

Input Set : A:\203515US77.txt
Output Set: N:\CRF3\01152002\J023888.raw

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L:9 M:270 C: Current Application Number differs, Replaced Current Application No
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:1639 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:1925 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:1929 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:1931 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
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